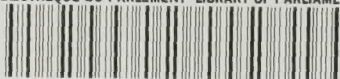


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Canada. Parliament. House of
Commons. Select standing
committee on forests, water-
ways and water-powers.

Report. 1914.

Canada, Parliament. H of C.
Select standing Committee on
forests, waterways and water-
power

DATE DUE		
SEP 10 1999		
APR 15 2005		
GAYLORD		PRINTED IN U.S.A.

REPORT

OF THE

SELECT STANDING COMMITTEE

ON

FORESTS, WATERWAYS AND WATER-POWERS

THIRD SESSION, TWELFTH PARLIAMENT

1914

PRINTED BY ORDER OF PARLIAMENT



PRINTED BY J. DE L. TACHÉ, PRINTER TO THE KING'S MOST
EXCELLENT MAJESTY

1914

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HOUSE OF COMMONS,

WEDNESDAY, January 28, 1914.

Ordered, That the following members do compose the Select Standing Committee on Forests, Waterways and Water-powers:

Messrs. Ames, Barrette, Béland, Bellemare, Blain, Bourassa, Bowman, Brabazon, Champagne, Charlton, Cochrane, Coderre, Cromwell, Cruise, Davidson, Ethier, Green, Henderson, McKay, Michaud, Munson, Osler (Sir Edmund), Perley, Richards, Rogers, Stewart (*Hamilton*), Thoburn, Warnock, Webster, White (*Victoria, Alta.*), Wilson (*Laval*), and Wright.

Ordered, That the said committee be empowered to examine and inquire into all such matters and things as may be referred to it by the House; and report from time to time its observations and opinions thereon; with power to send for persons, papers and records.

Attest.

THOS. B. FLINT,

Clerk of the House.

The Select Standing Committee on Forests, Waterways and Water-powers beg leave to present the following as their

REPORT.

Your committee, during the present session examined Honourable Sir Richard McBride, Premier of British Columbia, and Mr. H. R. MacMillan, Chief Forester of the Provincial Government of British Columbia, and beg to submit herewith, for the information of the House, the minutes of their proceedings, together with the evidence taken by them.

Your committee recommend that their proceedings and such evidence be printed in pamphlet form and that 500 copies be set aside for the use of the committee, and that rule 74 be suspended in reference thereto.

(Report concurred in by the House on June 9, 1914.)

MINUTES OF EVIDENCE.

PART I.—BRITISH COLUMBIA'S CONSERVATION POLICY.

HOUSE OF COMMONS,

COMMITTEE ROOM No. 101,

THURSDAY, March 26, 1914.

The Select Standing Committee on Forests, Waterways and Water-powers met here at 10 o'clock, the Chairman, Mr. Blain, presiding.

The CHAIRMAN: I rejoice with the committee that we have with us this morning so distinguished a person as Sir Richard McBride to speak to us. I must offer him an apology for the very short notice he was given. We simply took advantage of a hurried visit he is paying to the Capital. I will say nothing more except to welcome Sir Richard McBride to the Capital, and to express our appreciation of his presence and his willingness to help us in this way.

SIR RICHARD MCBRIDE: Mr. Chairman and Gentlemen, I had not the slightest idea when I arrived in Ottawa the other day that an opportunity would be afforded me of saying something to this very important committee of the House before I return to the West. You can understand, then, that I was greatly delighted to hear through one of your colleagues that you would be so considerate as to listen to some words of mine this morning, with the view, possibly, of making some use in your work here of the story that I might relate to you as to our work of conservation in the far western province.

As a fellow-Canadian, I cannot conceive of anything in the way of a citizen's duty that would be of more importance to the State than some measure of association with the task of advancing the conservation of the natural resources of the Dominion. As far as we have been able to understand the economic situation on the continent of North America, perhaps our neighbours south of the line have realized more quickly than we have done how essential it is for the general national well-being that no effort should be spared by the State to undertake and carry to completion so important a national work. The situation to the south of us in regard to conservation produced several political crises, because, in the opinion of many public men, the United States as a whole had not taken that keen interest in the subject that obtaining conditions justified, and definite action was stimulated by those periodical agitations. Hence, although the material interests of the United States went much further in the direction of waste than in Canada, public opinion and effort there in the direction of conservation was in advance of this country. We are now well on the high road with our neighbours. Watching closely the experience of older countries, as well as of our next-door neighbour, in the province of British Columbia, with a large and practically illimitable quantity of undeveloped natural resources to deal with, we have tried to take advantage of every experience that recent movements would provide; and I am in the fortunate position to-day of being able to tell you, very briefly, some of the things that we have attempted to do, and possibly successfully accomplished. I have not come here, as I should have done had I been notified

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a few days ago that I was to appear before you, with a concise and carefully prepared statement of the policies of the Government of the province of British Columbia. For this reason I feel a considerable reluctance in addressing you. Your time is valuable, and you are here to listen to nothing but the well-considered and carefully-thought-over conclusions that experts would be prepared to submit on an occasion of this kind. But supplemented to what you must have heard from the gentlemen who represent the province of British Columbia in the national Parliament, with respect to the provincial work there, I am able to add a word or two. You will understand, gentlemen, if I do not mention everything, if I do not tell the story, completely, I have but the explanation to offer that time has not been given me in which to properly equip myself for the task.

In the very first place, we in the provincial parliament and government, in respect to natural resources, have tried honestly to consider that the trust that is given into our hands is in no sense a provincial and domestic affair; but that, really, truly, and substantially, it partakes of a great national Canadian asset, and that we must deal with it, always having in mind that it is not so much the possession of the province of British Columbia as it is the property of the whole Canadian people. We try to get away, as far as we can, from the local, from the provincial groove, and view the whole situation on the broad national plane. We regard ourselves as guardians of the provincial assets in trust for the whole people of Canada.

To take up for a moment or two the question of the forestry and timber resources of the province of British Columbia, let me say that some few years ago, when a great deal of the legislation and departmental regulations had been challenged, both in Western Canada and the United States, the Government of the day decided that before any attempt at drastic alteration of those laws and those rules was made, it might be considered wise to have the entire problem carefully investigated by an impartial commission, composed of expert men, persons with experience. We understood that there is always an outstanding objection to commissions, that possibly they may be an agency not for expedition but for delay. However, I am happy to state that the commissions with which the provincial government of British Columbia in the last eleven years has been associated—and there have been a number of them—have been productive of tangible results and of efficient legislation. This investigation of the timber commission to which I have referred, is no exception. We had three very able men on that commission. They journeyed over British Columbia and other provinces; they went to Washington and to Ottawa; they inquired abroad wherever they found conditions somewhat similar to those in British Columbia; and the net result of their investigation, collected on the spot, was submitted in a very comprehensive and elaborate report—one that has been said by experts to be almost the last word on timber conservation, especially on the Pacific sea-board. From that report we have been able to select material as a basis of, and to enact, legislation that I am sure the Canadian people would have no hesitation in endorsing, as wise in the interests of that great industry of Canada.

The policy that outlines our lumber legislation, and the regulations passed thereunder, through and through, is a policy that will make for conservation. We are trying to anticipate, as well as we can, what the years that we are approaching may mean to the people of this country; and having this in mind, it is the first study of the Government in respect to the lumbering business in British Columbia, that it shall be carried on with due regard for every economy; that there shall be little or no waste; that destruction from forest fires and other causes shall be eliminated as far as reasonable human agency will permit; and that, so far as it is consistent with the public interest, the Government officials and the lumber operators and loggers shall work along the line of co-operation so that advantage will be taken of every possible circumstance, first to conserve the forest wealth of British Columbia, and

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next to secure from present day operations all of the good results we possibly can. There is no necessity to go into detail of what this work would involve; the question of forest patrol in itself is one that covers a wide range of discussion; the question of logging methods, how best the timber may be cut and removed and sent to the factory with the smallest possible degree of waste; also in what manner the provincial government should deal with the operators in the adjustment of the expense that is entailed in the patrol; and in the enforcement of the regulations that make for efficient forestry. I have no intention, gentlemen, of going into these questions in detail, but I can say this to you, that if you have the time to examine our forestry report, our Acts and our regulations—all of which may be had on your files here—I think you will agree, after you have carefully gone over them, that they have been most carefully prepared; that they are fair, reasonable and workable; that they will stand the test of fair impartial criticism. We have endeavoured through departmental and other experts to extract from your laws at Ottawa, from those at Washington, from those of the Mother country and European countries, and from those of all the other provinces, as well as some of the neighbouring states, the very best features they seem to afford, and you will find in the work of the legislature of British Columbia, to which I have just referred, I think, a good epitome of all the best elements. I think that it is but right I should say here, Mr. Chairman, that in this work we have not hesitated to come to Ottawa, from which source we have secured very valuable advice and two or three efficient officers. Nor have we hesitated to approach Washington, where we have also been fortunate in finding assistance that has proved invaluable. We have gone to Toronto as well, and then, of course, we have been in correspondence with all large centres where the lumbering industry is of any moment. We have tried to be thorough, and we have not spared expense in our thoroughness; and while this may be looked upon to some extent as a question of provincial concern, purely and simply, believe me, we as Canadians out there have tried to treat the whole subject in a national way, having in mind that the timber wealth of British Columbia and all that may result therefrom is not an asset that the far western province can claim as its property alone, but that rather it is a large and valuable national possession that we must consider we hold in trust for the entire Canadian nation. We have tried to assemble a staff of officials, alert, active on every occasion on which promptitude is demanded, men of sound judgment and with a high sense of duty. After all, in such affairs the personal element is an important factor, and while we may have laws and regulations that make for good conservation, we are of the opinion that unless we have the active machinery for the enforcement of those laws and regulations all our efforts may be fruitless. I think I may safely say, in passing from this timber question, that with our present statutes and our present official staff, you may safely depend on British Columbia giving a satisfactory response to the inquiry when made as to what we are doing out there to conserve what is essentially a national asset.

With regard to water-power, reference to which has been made by the chairman, of course, gentlemen, we know that it is but recently—and here I must speak in terms of years—that the question of development of water-power has assumed such large and practically national importance. There has been such a quick and yet such a substantial development in the growth of the agency of water-power as a great medium through which the industrial expansion of this country may advance, as to pretty well have taxed the ability of all Governments who have had to do with water-power, to ascertain just what laws will best suit and how most satisfactory results may be obtained. In British Columbia we have dealt for years past with the question of water rights by way of provincial legislation, trying to declare by statute a great deal of the law which had already been established as common law, and trying as well to supply perhaps any deficiencies there may have been in the common law of

the country because of local conditions. While the first Water Act of British Columbia was undoubtedly a valuable piece of legislation, we found that as the country grew, as irrigation systems were being developed, and as the water-power of the country was being called upon for industrial purposes, there must be amendments to the law as originally passed; and since the first Act was passed, upwards of eighteen years ago, we have passed two Acts in consolidation and in amendment of the original legislation. The last consolidation and amendment was passed by the House finally four weeks ago. In this last Act of Parliament for the conservation and administration of our water-power, we have tried to provide very simple and easily-enforced laws. Any gentlemen present of the legal fraternity, who have had to do with water rights, must understand how involved questions relating thereto must always be, especially in a new country where there has been rapid development and where there have been different governmental agencies in charge. In one generation, we had the Colonial Government, in another the Provincial, and another the Federal. These created complications and involved problems that are a little bit difficult at times to unravel satisfactorily to the public. On the whole, notwithstanding all of these difficulties, I think that our last Act is a fairly workable one and wise in its provisions, and that it will bring good results to the farmer, the lumberman and the captain of industry. What we propose to do with our water in British Columbia is this: in the first place, to prohibit corporations and individuals from filing water records unless it be their intention to make use of the water when taken over. We found that in the West and in other parts of the continent there was a disposition frequently on the part of private individuals and corporations to secure reserves of water-power, not with a view of immediate operation but in order to anticipate the future and to hold what is part of the natural wealth of the country on account of some speculative venture that may be deferred many years in its fruition. To overcome the development of any situation of this kind in British Columbia, the first policy of our Water Act is this: that if you stake off water, no matter who you are, you must be prepared within a reasonable time to use that water or to surrender it back to the people of the country. We have found that by the strict enforcement of a doctrine of this kind, a great deal of troublesome and mischievous staking of water records has been done away with, and only the legitimate and active man, who more particularly proposes to use the water, has been dealt with. Instead of files and records being encumbered with what you would call speculative applications, the question is now one of business and to get the best results. In the next place, in disposing of the water we have tried to arrange a schedule of fees and licenses—to which no one can object—that is fair to the public and fair to the operator. In the next place we have tried to devise regulations, so that the greatest efficiency may be derived from the water in use. If it be for the purpose of irrigation let every inch of water do its duty; and if it be for the development of power let us see that the works are so carried on as to get from the investment, and from the water conserved, the very best and most profitable results. We are still studying and watching closely the work of Australia, as well as of the United States of America, and other sections of the world where conservation is the first consideration. I cannot claim, while I have already pointed out that our laws are fairly satisfactory, that we ourselves are of the opinion that we have reached the era of perfection. We feel in British Columbia, gentlemen, that in this respect, as in respect to the lumber industry, there is a good deal left for us still to do and to learn, and that we can well afford the time and the expense of studying other provinces and other countries year after year so that we may be able to take advantage of all the latest developments at home and abroad. In a sentence, the policy of the Government is to control water as a provincial asset and retain it for the beneficent use of the people.

With respect to the mineral wealth of the country, I have had the good fortune for upwards of fourteen years now, with the exception perhaps of a term of twelve

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or fourteen months, of presiding over the provincial Department of Mines, and can therefore claim to have watched very closely the growth of our province as a mineral section of the Dominion. The mineral wealth of the province of British Columbia is a national possession, and I think I may say to you this morning without the slightest hesitancy, that we in that part of the Dominion are in possession of one of the richest mineral zones, if not the richest, in the world. The great difficulty in British Columbia is this: that but a small fraction of the mineral wealth of that country has been exploited to date. It is easy to account for a condition of this kind. It is because, owing to the immensity of the country and lack of transportation facilities in the more remote districts, it has been impossible to date to prosecute the exploration and the prospecting there that may have been undertaken, and successfully, too, east of the Rockies and in certain states of the Union. But where railways have been projected and have been built, I challenge fair criticism on this point: the province of British Columbia has been able to disclose profitable and promising mining operations. It is not fair to condemn a country, or a mining section of it, simply because there has been a failure here and there; and if there is any enterprise in the world that to my mind is so apt now and then to lend itself to speculation that may be unfair to the very industry involved, it is the mining industry.

I think I can safely say to you to-day that never before in the history of the country have we been able to claim so much assurance for our mineral wealth as we can do at this very moment. Districts that because of the panic and the break of the nineties had been practically abandoned for years, are now, by reason of the prosecution of legitimate mining, taking on new life, and they are responding in a very substantial way to the efforts of men who had the courage and pluck to stay by their properties and work them as legitimate operators would be expected to do. I am glad to be able to tell you that the official reports to the department from the Boundary, the Similkameen and other of our mining sections, including the Coast zone as far north as the Alaskan boundary at Observatory inlet, annually show conclusively that we are coming now into an era when the mining history of British Columbia will disclose new records from year to year. In the few observations I am making, I do not want to be misunderstood in my references. I want you to feel, gentlemen, that while I say as much as I have done for the province of British Columbia, I am not here to claim that it is any better than any other province. I am just as much an Ontario man, or a Nova Scotian for that matter, as any man in this room, and because I said what I did just now relative to the mining and other resources of British Columbia, I do not wish you to feel that I am trying to put that western province in a place of its own. I am simply trying to tell you what we as brother Canadians are trying to do out there, and we have every confidence that you, with all the experience and advantage you have in the East, are doing your part for your respective provinces.

But with regard to our mines, we have devised mining laws and have carefully adhered to the principle underlying all of them for many years past. We have found that our early laws relating to placer and lode mines, for the most part framed by the first pioneers of the country, and later on improved by men who followed their development closely, were well considered and designed to serve practical and profitable uses; and so, gentlemen, we have clung closely to the principles that were behind all the early legislation in the province of British Columbia. A very generous compliment has been given the province by no less an authority than the United States Senate of having, shall I say, almost the best mining laws in the world. A commission was appointed not many years ago by the American Senate to investigate mining laws with a view of applying the best to the new possession of the Philippines, and the net result of that inquiry was the official statement that the mining laws of British Columbia ranked very high in mining legislation of the world. Possibly it may have been that there were conditions in the Philippines very much like those we

have had to deal with in British Columbia, but we are gratified to have such a generous reference to a measure on our statute-books. Now our mining laws, Mr. Chairman and gentlemen, are framed with this policy behind every section of the statutes, that the legitimate prospector is the man entitled to the property, and that the Act must be construed with such intention, not to keep his prospect from him, but rather to see that he gets it and that he gets an unquestionable title to it. This encourages the prospector, it is a fair and reasonable thing, and it is what later on brings the operator and the developer on the scene. In the next place, our laws are designed so that a man cannot go in and if he finds a new camp or a new prospect practically cover the whole ground to the exclusion of his fellow-citizens. We give a prospector, in the case of a placer mine, a large discovery claim and two or three rights that would ordinarily follow, but we do not give him a monopoly. There is the doctrine of conservation behind that law which makes provision that another prospector may come in and share in the field. With regard to lode mines, reasonable ground may be staked, but nothing is permitted in the way of monopoly. Generally speaking, we have tried, both with respect to coal and metalliferous mines, to have fair and economic regulations observed. So, in conclusion both with regard to coal mines and metalliferous mines, we have tried to fairly enforce by legislation the principle of conservation, still retaining to the State a fair and reasonable interest in all profits that may accrue to the private individual or to the corporation in each or any of these operations.

I could speak to you about the conservation of our many Government possessions in British Columbia, including buildings, roads, bridges, etc., because it is a very wide subject. I could say to you that of the many and important duties that fall to that far western province we are trying to keep permanently before us the fact that the conservation work of to-day stands on a very high plane, and as I said in my opening remarks, we keep prominently before us the thought that such conservation represents the very highest duties of citizenship that we may be called to perform. As I sit down, you will be interested to know that in addition to the conservation policies with regard to our timber, we have for some seven and a half or eight years past enforced reservation against the sale of any more timber in that country. This you would perhaps like to learn is the act of Mr. Green, who is now member for Kootenay, and who is an old colleague of mine, and it has been calculated that it will undoubtedly add millions and millions of dollars to the national wealth of the Dominion of Canada without at all impairing the value of the investment held in that far-off province by many timber operators. Mr. Blain and gentlemen, you are most kind to have me come here and tell you in these few words of mine the story of conservation in British Columbia. If anything I have said can assist you in your labours, or if you can find anything interesting in it at all, I shall, gentlemen, feel more than gratified for the privilege you have offered me in addressing you. I thank you.

Mr. MACDONELL: If you will permit me, Mr. Chairman, to make a motion, I think it is felt by every member of the committee that it is due to the distinguished gentleman who has just spoken to move a very cordial vote of thanks for the splendid address he has given us. Sir Richard McBride apologized in his opening remarks for coming here unprepared; I think those of us who have had the privilege of listening to his remarks feel there was no occasion for those apologies, and that the very shortness of his remarks accentuated the prominent points that he desired to bring out. Personally, I listened with the greatest possible pleasure to his address, and I think that the liberality and the breadth of vision with which the province of British Columbia has dealt and is dealing with her natural resources is an object lesson not only to other provinces, but to all civilized countries. Sir Richard has told us plainly that he and his Government have not done this from a provincial stand-

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point, but that they regard it as a national question; it is Dominion wide, it is Imperial wide, and it is in that conception of this great question that the natural resources of this country can best be conserved, not only for the people of to-day but for all time to come. We have learned from him, too, the splendid spirit of fairness with which the province has co-operated, in the development of its natural resources and their protection, with the people who are interested in getting access to those resources and making them marketable and merchantable. In my own native province, and in many of the rest of the provinces, the natural resources have been more or less developed, but we all know, the whole world knows, that British Columbia is practically the last great area which civilization and exploitation has not already taken possession of with regard to natural resources. The natural resources of British Columbia are almost boundless, and Sir Richard McBride has told us that notwithstanding the immense extent of these resources long since proper precautions have been taken to preserve them to posterity, and that his Government is taking the position that it is merely acting as trustee in the holding of these vast possessions for the present and future generations. We have all listened to Sir Richard with the greatest interest. We know that he is a very busy man, that he has other important business engaging his attention and we appreciate the fact that it is more than good of him to come here this morning and deliver such a splendid, short, pithy address showing us the manner in which the natural resources of his province are being dealt with by him and his Government.

I move that a hearty vote of thanks be accorded to Sir Richard McBride, and ask Senator Pope to second the motion.

Senator R. H. POPE: Mr. Chairman, it is with the very greatest pleasure that I second the motion of my honourable friend, Mr. Macdonell. I am very much pleased with Sir Richard's address. All his personal friends, of whom there are so many in this part of the country, are delighted to see him enjoying such good health. It shows that conservation is not confined to any particular asset, but has extended to himself as well. I have much pleasure in seconding this motion.

The CHAIRMAN: Gentlemen, you have heard the vote of thanks moved by Mr. A. C. Macdonell, of Toronto, and seconded by Senator Pope, that the thanks of this committee, and of this meeting, be tendered to Sir Richard McBride for his very valuable address. (Applause.)

I have much pleasure, on behalf of the committee and other gentlemen present, Sir Richard, in presenting to you this very hearty vote of thanks. We regard it as a very great privilege that such a busy man as yourself has spared sufficient time to present the valuable facts you have given the committee.

Sir RICHARD MCBRIDE: Mr. Blain and Gentlemen, I appreciate very much the vote of thanks you have just given me. All I can say is, that if any member of the committee happen to be in Victoria when the next session of the Provincial House is on, and it is my good fortune to still continue there, come prepared to go before the Legislature on conservation.

Committee adjourned.

PART II---FORESTRY WORK IN BRITISH COLUMBIA.

HOUSE OF COMMONS,

COMMITTEE ROOM No. 101,

WEDNESDAY, April 8, 1914.

The Select Standing Committee on Forests, Waterways and Water-powers met here at 10.30 a.m., the Chairman, Mr. Blain, presiding.

The CHAIRMAN: We have with us this morning Mr. H. R. MacMillan, Chief Forester of the Provincial Government of British Columbia. I have much pleasure in asking him to speak to us.

Mr. MACMILLAN: Mr. Chairman and Gentlemen of the committee, I can assure you I am pleased to have this opportunity of saying a little about the work which is now being done in British Columbia for the conservation and business management of the forest resources of that province. I will start by giving a general idea of what we have discovered the forest resources of British Columbia to be. Although I was fairly well acquainted with timber conditions throughout Canada before going out there from the Dominion Government service two years ago, I have found that the forest possibilities of British Columbia have been very generally underestimated. There are south of the 65th parallel, roughly, about 250,000,000 acres of land, at least 50 per cent of this land is timbered; probably only 15 or 20 per cent of it is covered with timber which is now accessible and available to the present-day lumbermen. But there is no doubt but that there are at least some 350,000,000,000 feet of merchantable timber in the southern portion of the province, not including any territory more than 150 miles north of the Grand Trunk Pacific railway. This merchantable timber will, at the present rate of cutting, last probably 100 to 150 years, even allowing for quite a loss by forest fires. In addition to the timber land which grows merchantable timber, there are immense areas, included, of course, in the 250,000,000 acres I mentioned, which have been burned over during the last fifty or sixty years, and on which there is at present absolutely no merchantable timber, but it is all growing up with young timber, which, if protected from fire will, of course, be mature before there is any call upon it for industrial purposes.

In order to give you a general idea of the timber administration of the province, I shall call attention to the Forest Act, which I believe is the most complete piece of forest legislation now existing in Canada. It was drafted and introduced by the Hon. W. R. Ross, after he had made a study of forest conditions throughout Canada and the United States, and he took advantage of the experience of the older countries and included in the Forest Act practically everything that was necessary to give the proper constitution to a Forest Branch. The main features of the Forest Act are that it creates one branch of the Government service which is empowered and made responsible for the state of the forest resources of the province, the protection of the public timber from fire and trespass, the administration on most progressive principles of all timber lands which have already been alienated either by lease or license, and for the sale of such timber as now remains in the hands of the Crown. It is not generally known that in British Columbia probably a third of the mature timber still belongs to the Government.

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By Mr. Thoburn:

Q. What kind of timber is it?—A. On the coast, south of the north end of Vancouver Island, and including the area covered by the island, and extending on an average 25 to 50 miles inland from salt water, the timber is chiefly Douglas fir, cedar, hemlock, balsam and spruce; and then, from the north end of the island north to the southern Alaska tip, the Douglas fir disappears and the timber is chiefly spruce, hemlock and cedar. East of the Rockies, speaking generally, the timber is in about half of the region south of the Railway Belt, yellow pine and spruce, and on the higher elevations lodgepole pine and spruce. In the other half of the region south of the Railway Belt, in the Columbia and Kootenay, hemlock and cedar take the place of the yellow pine. North of the Railway Belt the timber is very much smaller, and is comparable to the timber in northern Ontario and northern Quebec, where you get timber that, as a rule, does not average probably more than 10 to 16 inches on the stump. Of course, there will be a few larger trees. This is more suitable at the present time for pulpwood than anything else, and it is nearly all spruce, lodgepole pine and balsam, with very little cedar and hemlock.

The first work undertaken by the Forest Branch was a general survey of the forest resources of the province. This was very difficult to carry on owing to the lack, during the two seasons we have been at work, of getting men who have been trained to that character of work. We have found it economical to co-operate with the Surveyor General, who is now making a geodetic survey of the province, and at an expense of from one-third to one mill an acre we have covered over 20,000,000 acres in regions for which we had previously absolutely no information of the timber. The regions covered were in the upper valley of the Nass, north of Prince Rupert; the junction of the Finlay and the Parsnip rivers; the territory around Quesnel lakes; the route of the Grand Trunk Pacific and of the Canadian Northern, between Kamloops and Yellow Head pass; the territory around the Nation lakes and the Cassiar country, and along the line of the new Kettle Valley railway. In the northern country we find that the timber possibilities are much better than before supposed. For instance, in the valley of the Nass we found in a survey which did not extend to the head of the river, and did not go out of the timber, six billion feet of pulp timber, with water-power sufficient for the development of a pulp industry. In the interior we found that, except in a very few locations, there was not much mature timber at the present time, but there are millions and millions of acres of timber twenty to fifty years old, and growing generally on land which cannot be used for agriculture. This timber at the present time we are endeavouring to protect from fire. I have no doubt but that the timber possibilities of British Columbia, by the time the population exists in Western Canada to use the timber, the capital has been brought into the country to manufacture it, and the transportation facilities provided to handle it, will be able to sustain indefinitely an annual cut of five billion feet. At present the annual cut for all purposes is about two billion feet; about two-thirds is manufactured into lumber, and the remainder into other products. An estimate was made last year of the value to the province of the timber industry. On a very conservative basis, even at the low prices which have been realized during the last year or two, there has been brought into the province at least \$30,000,000 from the manufacture and sale of timber products.

In this respect timber ranks about even with mining. It employs more labour, however, and gives rise to much more local trade than does the mining industry.

Our first difficulty was to develop an organization for the protection of the forest from fire. The fire hazard in British Columbia has increased very rapidly in the last three or four years owing to the rapid development of the country. The building of railroads through the north, and the coming of settlers who have been unused to living in timber regions, have made necessary a much more extensive system of fire

protection than that which had been satisfactory before. The province was divided into eleven administrative districts, and a man placed in charge of each district, who was responsible for all Government forest work, the collection of revenue, the supervision of sealing, the inspection of logging operations, and the organization and maintenance of a fire protection force. The expenditure on fire protection for the coming year will be, probably, \$360,000, and the number of employees, dependent upon the character of the season, will vary from 300 to possibly five and six hundred if it is an extremely bad season. We try to make our money go as far as possible by appointing as few permanent men as we can. The permanent men are the backbone of the organization. Under them are the five months' men, who are each given charge of territory which on the average will be well over a million acres in extent. Then each of these men, who is responsible to the District Forester, is given authority to engage local men. Of course, the five months' men are local men, too. They have to be residents of the community who have the respect of the people and who have shown sufficient experience in the timber to be able to handle fire protection—a duty requiring the highest quality of foreman. Each of these five months' men, who is really foreman for his district, is given authority to engage men for shorter periods. It may be two or three months, or it may be only two or three weeks. Furthermore, each man is given authority to employ fire fighters when a fire occurs.

The two or three main points which we have found of interest and of use in fire protection are, first, the permit system. No fires are allowed in British Columbia without a permit having been secured from an employee of the Forest Branch, and this employee must first visit the locality where it is desired to start a fire for clearing or construction purposes, and assure himself that there is sufficient force on the spot to handle a fire should one break out, and that the conditions are such that a dangerous fire is not likely to occur. This has probably saved us much more timber than any other feature of our legislation. It has secured for the policy of fire protection, I think, the support of most of the people in the country; they have all seen that it is necessary to be careful with fire. This is one of the features that struck me as most valuable, with my experience in the provinces of Manitoba, Saskatchewan and Alberta, where settlers start fires in the timber at any season of the year without thought of danger to valuable timber.

There were about twelve thousand permit fires last summer, and of this number only seventeen escaped control, which is a pretty good record for a country like British Columbia, where the land is all wooded, the population sparse, and fire is a necessary preliminary to all agricultural operations. Settlers have not complained against the permit system. They support it because it assures them both protection against fires set carelessly by others, and the assistance of the fire warden in handling their own fires.

Another important feature was the system of handling railway construction. There have been about 2,000 miles of railway under construction through the forest in British Columbia in the last two years. Thousands of labourers have been travelling up and down the grade, cooking over camp fires, setting fires in cedar stubs and adding to the fire hazard. These men have absolutely no idea of the danger of fire. They carelessly leave fire in the slash always found along the railroad grade. Three years ago a fire which extended for 80 miles along the Grand Trunk Pacific started from this cause.

Great care is necessary in handling the fire situation along railroads under construction in such a manner as to avoid adding to the burdens of construction, and at the same time in such a manner as to control all possible fires. The method adopted in British Columbia has been to require a careful clearing up of the right of way and the burning of all the slash under permit and supervision at a safe season. During the whole of construction all lines are under the supervision of permanent members of the fire protection staff the whole year round. Where timber is cut for construction purposes the contractors are required to pile or burn the slash on the cut-over

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area, special attention being given to areas to which fire might spread from the right of way. The chief causes of the fires which have swept nearly all forest regions adjacent to railways in Canada have been the leaving of slash on the right of way to be fired in a dry season and the leaving of the slash in the adjoining forest, to which fires from the right of way inevitably spread. I consider the prompt clearing of the right of way the first essential in railroad fire protection. The second is the safe disposal of the slash on logged-over areas adjoining the right of way. When these are accomplished, other common causes of fires are easily controlled by patrol. Fire wardens, spread five to ten miles apart, patrol all railroads under construction in British Columbia. The railway companies usually pay the cost of patrol. Such precautions were successful in 1913, only one or two thousand acres of timber were burned over.

Another feature of fire protection which is interesting us greatly at the present time is the question of the disposal of logging slash resulting from the logging operations throughout the country. There are about 75,000 acres of slash created each year in British Columbia by 800 different logging operators. A great many operators believe in slash disposal for the benefit of their own timber; a great many of the others are not yet convinced that it is feasible. There is no general regulation of slash disposal feasible in any province. As you know, natural conditions differ in each district and on each logging operation. While I believe that in nearly all cases some form of slash disposal is necessary to ensure the protection of timber from fire, I wish to make clear the fact that no general rule can be enforced in all localities. In some districts the slash may be burned broadcast, in others it should be piled and burned in order to prevent destruction of trees left standing on the ground; in others it should be lopped so that it will be flattened by the winter snow and not readily in contact with the ground. Slash left on a logging operation is a menace to the mature lumber standing in the district, and also to the young timber which will come up on the logged-over land. The fire protective problem of Canada includes not only the protection of mature timber; the young growth which will supply the saw-mills of the future must also be protected.

Logging operators in British Columbia burned about 10,000 acres of slash in 1913. Each year the timber owners are becoming more favourable to slash burning as a fire protective measure. Experiments are conducted by the Provincial Forest Branch each year to demonstrate the feasibility of slash burning and to show that it is a cheap form of insurance.

A feature of forest administration which has been rather important in British Columbia this last two or three years has been the disposal of the timber which still remains in the hands of the Crown. As I said a few minutes ago, contrary to the general impression, all the merchantable timber was not taken up by license in British Columbia several years ago. The licenses are scattered, and we find now that there is adjoining them quite a large quantity of government timber. From surveys which we have made in the Coast district, where licenses cover the largest proportion of the timber, we find they only cover about three-quarters of the government timber. We have adopted a policy of cruising this timber and selling it by public auction or calling for public tenders, the timber, of course, going to the highest purchaser. One regulation is that the timber shall be all logged-off within the period which is stated in the contract, which is usually two, three or four years, the idea being that the timber will not be held for speculative purposes, but will be logged when it is purchased. Another regulation is that the brush shall be disposed of according to the regulations of the Forest Branch, which are varied for each logging operation.

The contracts drawn up to the present have usually required that the slash be burned, as it lies, at the conclusion of the logging operations. Occasionally local conditions are such that the logger is required to do nothing beyond cutting down snags and building a fire line around the area logged over.

Every contract contains a clause requiring that all merchantable timber be removed. The principle of these timber sales is that the Government shall receive full value of the timber, and that the ground shall be left in the best possible shape for another timber crop.

By Mr. Thoburn:

Q. What do you mean by building a "fire-line" around it?—A. On the coast, if the logging operator will put a trail around the logging slash, in a good many locations we let it go, because if then a fire does happen to start in, the fire warden can quickly get in to any part of the tract, and can fight the fire advantageously.

Q. It is a road, then?—A. It is not nearly so good as a road, and not so expensive; it is a rough trail eight or ten feet wide.

By Mr. Paul:

Q. On what contract do you sell the timber?—A. I have here a sample contract, which can appear at the end of the printed report of these proceedings.

The quantity, quality and value of the timber is ascertained by a careful cruise. The logging cost is estimated, and the value of the timber to the Government is estimated in the same manner as a private timber holder estimates the value of stumpage by subtracting the logging cost and fair logging profit from the value of the logs at the mill. This stumpage value is adopted as the upset price.

The provisions in the contract covering clean logging are designed to prevent waste of timber. No logger is required to take out material on which he loses money, but all loggers are required to cut low stumps, leave no merchantable material in tops, fell trees up-hill and take out all logs. The work of the best loggers in the district is a guide to the standard adopted by the Forest Branch, due allowance being made for defects in the timber and the character of the logging ground.

By Mr. Thoburn:

Q. How small do you allow them to cut timber?—A. Every place where we have had any timber sales up to the present time we have required them to cut clean, taking off everything that is merchantable. That is not the same kind of forestry that they practise in Europe, or that they can practise in some of the eastern regions of America, both Canada and the United States; but in British Columbia the fire hazard is great, and the only way we can get fire protection, particularly in the heavy coast forests, where practically all our timber sales have been located, is by having the slash all burned. Labour is high. There is a large quantity of timber left in the woods; we know that if we get the logger to cut it clean, take everything off that is merchantable, and burn the slash, we will get a new forest of some kind. On the coast it would be Douglas fir; in the interior lodgepole pine.

No advantage would be gained by leaving valuable trees standing for seed purposes on the tracts now logged over under timber sale. As it happens, sufficient defective non-merchantable trees are left to supply seed. Further, it is doubtful if, in the cases of which I speak, seed trees are necessary, as investigations have shown that in the western states, where they have been studying the question of reafforestation very carefully for about ten years, that the younger trees which come up do not come from the seeds which fall after the logging operations are completed, but they come from seeds in the ground before the logging operation was started; that has been our experience. If we log clean in almost any timber type in British Columbia and burn the brush clean after it is logged, we will get a first-class stand of young trees at a minimum expense and at a minimum fire risk.

The question of cost must always be considered carefully. When the logger is required to leave a proportion of merchantable timber for seed purposes the logging cost is inevitably increased. Any increase in logging cost is, under the practise of

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selling timber in British Columbia, immediately reflected in a decreased revenue. The problem always is to secure a satisfactory natural reproduction of timber without imposing undue burdens on the logging industry, and without unnecessarily reducing the Government revenue. It is a duty to provide for the regeneration of the forest, but it is a duty to secure this result economically. Fortunately, our experience has been that in British Columbia, in almost all regions, clean logging, followed by slash burning, will be followed by an excellent thrifty crop of young trees.

Q. A second crop of the same kind of timber?—A. Speaking generally, yes. In the Douglas fir belt, where probably two-thirds of the timber in British Columbia is now cut, the original mixture of timber is Douglas fir, cedar and hemlock, with a little spruce, white pine and balsam. These are the important trees. After logging and slash burning here the second crop is usually Douglas fir.

Q. What does Douglas fir compare to in Ontario?—A. There is no tree in Ontario resembling Douglas fir in appearance or in the qualities of its timbers. It is as important commercially in British Columbia as white pine is in Ontario. Douglas fir is the largest tree in Canada, and is the only species which can be depended upon to produce dimension of construction timbers for use where strength and durability are required. Douglas fir lumber has been so effectively used on the Pacific coast in the furnishings of dwellings and offices that it may confidently be expected to find an extensive market in the interior furnishing of the better class buildings in eastern Canada.

By the Chairman:

Q. How far advanced are any of these second growths of timber?—A. You see in a great many places in the province, where fire has followed old logging operations of many years ago, fine thick young forests about twenty or thirty feet in height, and about as many years old.

Q. What does your Government do towards protecting that timber?—A. The greater value of the mature timber demands that it be given first care. The young second growth, which on old logging operations and on old burns covers many millions of acres and gives promise for a great timber, lumber and pulp industry in the future, is not neglected. The same laws which protect the virgin forest protect the young growth. The officers enforcing the law, the district foresters, rangers, forest guards and patrolmen, are almost as careful to guard against fire in young growth as in mature timber.

There are two reasons for this policy of protecting young timber. One is that no fire anywhere in forest land can safely be neglected. It may start in young growth and sweep into merchantable timber. The other and more important reason is the value of the young timber itself. Other countries have gone to great expense in planting young trees to protect watersheds and produce future timber crops. In British Columbia nature is planting these young trees without expense to the public. Protection from fire alone is necessary to ensure that a valuable forest will perpetually cover the mountains, protecting the waterflow and supporting many industries.

Q. After about thirty years the height of the timber is about thirty feet?—A. The timber will be, roughly speaking, about that height. For the first few years the rate of growth for a Douglas fir on the coast is a foot a year. The rate of growth, however, varies as in the case of agricultural crops, because the soil and the climate affect the growth of timber very greatly.

As you know, the Dominion Government has adopted a very progressive policy of examining vacant public lands in advance of settlement, in order that the land which is manifestly unsuitable for any form of agriculture may be withheld from settlement. The benefits of this policy are two-fold. The new settler, unacquainted with conditions in a pioneer country, is prevented from settling on worthless land where he will lose his

small capital, strength and courage, and in the end fail to make a living. Secondly, this poor land unfit for cultivation, will be protected from fire and used for the growing of timber.

The policy of forest reservation is somewhat different in British Columbia. In the region where there is a danger of settlers locating on land which will prove disappointing, the land is first classified by the Forest Branch. Land which is found to be distinctly non-agricultural is not opened up for settlement, but is held under reserve by the Government. Such lands held under reserve are administered for the production of timber.

By Mr. Best:

Q. How would the expense in regard to the cost of taking off the timber in British Columbia compare with that in Ontario? A. Do you mean the logging cost?

Q. Yes. A. I am not very familiar with the logging cost in Ontario, but on the coast of British Columbia the logging and milling are two separate operations. In most cases the logger pays his stumpage, puts his logs into the water and sells them in Vancouver on the log market to the mill men. Logs sell in Vancouver at present for about \$6 to \$6.50 for No. 3 logs; \$8.50 to \$9.50 for No. 2 logs; and there is generally a spread of \$11 to \$12.50 for No. 1 logs.

Q. That is a thousand feet? A. Yes, British Columbia scale. The cost of logging varies at the coast from \$4, on an exceptionally good logging chance, to \$7.50 or \$8 per thousand, and then there is a dollar to be added to that on the average for towing to the mill. In the interior of British Columbia where the logs are very often railroaded or driven to the mill the cost of logging varies in very few cases probably \$4.50 or \$6 to as high as \$10 per thousand. That cost is based on the Doyle scale. A lot of the logs are very small, so that it does not cost that much per thousand lumber scale.

By Mr. Charlton:

Q. What is the regular length for logs according to British Columbia scale?—A. At the present time anything that is over forty feet British Columbia scale, is scaled as two logs, but we are not taking any particular interest in the length of the logs, except that we would like to get the operators to vary their log lengths so that they would take them out as high in the tree as possible instead of leaving a twelve or twenty foot stick in the tree.

Q. The British Columbia log scale implies logs thirty-two feet long, measured at the top end?—A. I misunderstood your question. That is the case. Most logs taken out on the coast are thirty-two feet long.

I do not know whether you would be interested in any of the features of the royalty legislation which was passed this winter, or whether you have already heard about it or not.

The CHAIRMAN.—The committee would like to have an explanation of it.

The WITNESS.—The Government adopted a new principle in the Timber Royalty Bill which passed the Legislature during the recent session. The timber industry is most important to the people and to the Government themselves in view of the fact that the revenue is \$21,000,000 from the Forest Branch alone. It did not seem fair to raise the royalty unless lumber prices improved, and unless the lumbermen were making more profit. On the other hand, while the Government would be perfectly willing to make and fix the royalty from year to year, just as the conditions at that time warranted, the lumbermen could not, as you are aware, finance on that kind of an arrangement. If he wished to borrow money, as many lumbermen in British Columbia and elsewhere do, to build mills, or carry timber, or carry on a manufacturing business, he would have to be able to show his creditors what kind of a title he had to standing timber. A compromise was therefore arrived at which provided that an increase which should be made this year would take effect next January; that that increase which

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would bring the royalty to an average of about 75 cents, would be effective for five years, and after that date the Government would take, as additional royalty, from 25 to 40 per cent of the increase in the wholesale selling price of lumber over \$18—the idea being that with the high cost of carrying timber in British Columbia, the length of time that a great deal of it would necessarily be carried, and the cost of manufacturing, the lumbermen should take what profit he could get when the price was \$18, paying, of course, his royalty of 75 cents, but after that period was reached the increase in price should be shared between the Government and the operator. It is, I believe, a new principle in dealing with timber. I think it has been applied to some extent in the United States, but there is the first introduction that I know of in Canada.

By Mr. Thoburn:

Q. Does that do away with royalty?—A. No, the fixed royalty by statute remains. We did not raise the royalty on No. 3 logs. We grade all the logs, the idea being to get the operator to take No. 3 logs out of the woods, because there is not so much money in them anyway.

Q. What is the royalty under the present law?—A. 85 cents on No. 1 and No. 2 and 50 cents on No. 3. The average will be about 75 cents on all timber, and that royalty will stand always as a base royalty, which is never reduced and is only increased about \$18. Then, supposing lumber is \$20 the Government will take say, 40 per cent of that \$2, 80 cents, and add it to the existing royalty, the idea being that under the license system the Government is interested in the increment of the timber, and that interest will be exercised, and an equity will be taken when the selling price of lumber shows that timber is increasing in value.

By Mr. Charlton:

Q. That 40 per cent is now on all classes of lumber?—A. The average of all classes of lumber.

Q. It is 25 per cent?—A. I was shortening the explanation up a little. It is 25 per cent for the first five years, 30 per cent for the next five years, then 35 per cent, and then 40 per cent. This legislation covers a period of the next forty years.

Q. It runs up to 1954?—A. It runs up to the end of 1954, yes. I do not know if there is any further information that I can think of at the present time that the committee will be interested in, but I shall be glad to answer any question.

Q. How do you get the average price of lumber? There is a certain royalty up to \$18. How do you get at the average price?—A. The Royalty Bill provides that the officers of the Government shall have access to all sale records of all operators in the province, and a staff of accountants will be engaged to ascertain the average price.

By Mr. Thoburn:

Q. Apart from the timber is there much agricultural land in your country?—A. There is a large area, particularly along the Grand Trunk Pacific and around Fort George. It is pretty hard to say just how much agricultural land there is. There is agricultural land in every valley, but it is almost impossible to say what the aggregate area of these valleys would be. It depends upon how high they find it possible to grow crops on the slopes.

By the Chairman:

Q. Are these lands sold to settlers outright?—A. In some sections of the province the remaining public land is held for pre-emption; and in other sections, the section west of the 124th meridian, I think it is, and north of the 51st parallel the land is open for sale.

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Q. Does all the timber go to the settler?—A. No, no land is open either for sale or pre-emption which has over 8,000 feet per acre west of the Cascades, or 5,000 feet east of the Cascades, and in cases where land averages less than that quantity per acre, and the land is sold or pre-empted, the Government still retains a royalty interest in the timber, and that royalty is collected when the timber is cut.

Q. On every class of timber?—A. Yes. Except that the settler will, of course, cut timber for his own purposes, cut it or burn it. But if he cuts it for sale he is required to pay a royalty.

Q. As to your streams and water-powers, are they very many?—A. I am not an expert on water-powers; I have been around the province a great deal and have seen what appeared to me to be a great many powers everywhere, particularly up the coast. I am informed, for instance, through the Conservation Commission survey made during the past two summers of the water-powers on those streams emptying into salt water, that there are a million available horse-power between the international boundary and the southern Alaska boundary. The water-powers are administered by a separate branch of the Lands Department.

By Mr. Paul:

Q. What is the average size of a timber berth?—A. There is no limit to the size at all. For instance, we do not try to have the boundaries straight lines, as it is a rough country and every separate stream is practically a separate logging chance. We sell everything merchantable on that area.

Q. Supposing an operator wanted two or three square miles?—A. He could find an area like that.

Q. You would sell in small lots?—A. So far as possible we are not at the present time in favour of putting any Government timber on the market, because at present it would not realize its worth. Our timber sales at the present time are confined to complete or to fill out existing logging operations. A man will have two square miles in the middle of a valley. If he logs off his two square miles nobody can come back for the fringe of timber which lies at the head of the small valley or on the upper slopes. Therefore we endeavour to sell that fringe of timber when the main valley is being logged.

By Mr. Best:

Q. Supposing there is a bush fire?—A. When timber is injured or killed by fire, it is sold immediately if a purchaser can be found. Timber standing on agricultural land needed at present for settlement, is also sold as rapidly as possible, under conditions requiring immediate clearing of the land.

By Mr. Paul:

Q. What system do you have to get a knowledge of the amount of timber taken off the land by the jobber?—A. All logging camps are inspected on an average about once in three months. Most of our logging is on salt water. Every logger is assigned a special mark which he is required to put on his logs before they go into the water. If we find him not marking his logs there is a heavy penalty. The loggers mark their logs for their own protection, because if there is a storm and the boom breaks they cannot prove ownership unless the logs are marked. All the logs are scaled by Government scalers, and in that way we keep an absolute check on the quantity cut off the different areas. It requires a lot of routine work, but it can be worked out very satisfactorily.

By the Chairman:

Q. What becomes of the timber that breaks away from the boom?—A. You mean the timber that floats around until some person beachcombs it? It is mostly picked up.

Q. Is there any government regulations as to its disposal?—A. No provincial government regulation. It is all on navigable waterways, which are administered by Dominion statute.

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Q. Just one question about your fire protection force. Does the government offer any prizes to parties cutting timber to prevent fires?—A. No, there is no system of encouragement, because if there is a fire they are the biggest losers. Any person logging is required to put out, at his own expense, fires in his own logging works. It is rather a penalty as an encouragement instead of a prize.

By Mr. Warnock:

Q. I would like to ask if there is a system of grazing regulations in the forest reserves such as there is in Idaho or Alberta?—A. We have no grazing regulations. But in a general survey of the province in the last two years we have found that there are probably 20,000,000 acres of first-class unused range in the province, chiefly north of Lytton and west of the Fraser river. Some of it is east, but the best portion is west of the Fraser river. The only way in which the country can be made, so far as can be seen, to support an agricultural population is by making use of the public range. The areas of agricultural land which lie on the lower benches and in the narrow valleys are chiefly valuable for the growing of rough crops, and are so scattered that even if a person did grow grain crops they could not get them out and sell them at a profit. They could take cattle in and raise winter feed, and there would be an average season of two and a half to five months when the cattle would have to be fed. I have estimated that the area will carry a million head of cattle. There are few users of the range at the present time. There are about 7,000 sheep, 10,000 horses and 66,000 head of cattle on the range at the present time.

Q. That would be principally north of the Canadian Pacific railway?—A. Most of them are north of the main line of the Canadian Pacific railway. Before adopting any regulation for the use of this range, we are making an investigation of the present conditions under which the range is used, and we are getting into contact with all the cattle owners so that we can work out regulations which will be mutually profitable. There will be some regulations necessary for the stock owners' benefit, because if the stock owner can register his claim to the use of certain grazing areas he will be able to put the stock industry on a more permanent basis.

Q. The reason I asked the question was that regulations are just being inaugurated now in regard to forest reserves in Alberta, and I think also in Saskatchewan. I was rather interested to know the fees that will be charged and the regulations that will govern the various classes of stock. Will these areas that you spoke of be accessible to sheep?—A. There are some localities that sheepmen who have been in there say are perfectly adapted to sheep raising. It may be that the success of sheep raising will remain to be demonstrated, because other people who have had experience say that there are reasons why you cannot raise sheep there. It would be necessary in any event to keep sheep and cattle on different ranges.

The stock men in the southwestern and northwestern states are now very strong supporters of this policy of a permit system for handling grazing lands. The Government gets a revenue from it and controls the final disposal of the land, in case the land is improved by further discoveries in dry farming, or in any way becomes available for a better use than grazing. The stock man also has the assurance that whenever he has a certain number of cattle he can get grazing for them. He is protected against encroachment.

MR. CHARLTON.—I would like to move a vote of thanks to Mr. MacMillan, whose address has been very interesting and instructive. Mr. MacMillan was at one time in the Department of the Interior here for several years. The British Columbia Government was then enterprising enough to secure him as their chief forester. I have met him at several forestry conventions and we have always had a great deal of useful information from him. It is claimed that British Columbia is the farthest advanced in fire protection of any of the provinces. I do not know, Mr. MacMillan, whether you mentioned the rate charged for that.

The WITNESS.—It is one and one half cents per acre for privately-owned land.

Mr. CHARLTON.—They charge the lumber owners one cent and a half per acre, and the Government pays another cent and a half, making three cents for fire protection. In the province of Ontario the lumber owners pay for the protection themselves, and the Government undertakes fire protection on the Government lands that are not yet disposed of. Last year the Government of Ontario paid out \$234,000 and the lumber holders \$91,000, making \$325,000 in all. There were 925 men employed in fire protection in the province of Ontario. In the province of Quebec the Government does very little, but the lumber owners engage their own men. There is, as you know, Mr. MacMillan, an organization similar to that in the northwestern states, which has an oversight of about six million acres. In New Brunswick and Nova Scotia, the expense, so far as the Government is concerned, is very little. The expense to the Dominion Government for fire protection in the provinces of Manitoba, Saskatchewan and Alberta last year was \$1.61 per mile. This year it will be \$1.92 per mile. In the Railway Belt of British Columbia the figures for this year are 93-100ths of one cent per mile.

In regard to what Mr. MacMillan said about clearing the timber land quickly, I have always held that was a short-sighted policy for this reason: It is the policy of nearly every Government to conserve its timber, and to sell the timber and require it to be cleared in two or three years is the very opposite of conservation. As long as lumbermen pay, especially in British Columbia, the ground rent which the Government requires, it seems to me it would be a very wise thing for the Government to let him keep it always. The Government charges \$140 a square mile each year for all the timber west of the Cascades, and \$115 for timber east of the Cascades, although I believe under the new law the charge is now \$100.

The WITNESS.—Yes, \$100.

Mr. CHARLTON.—I think it is a wrong policy to require the lumbermen to cut his timber as quickly as possible. The policy of the Government should be to conserve it. Mr. MacMillan has spoken of a royalty in the United States. I was not aware they had any royalty there; my information is that they sell the lands outright.

The WITNESS.—I was referring to the national forests in the western states where they have sales of timber. They sell the timber there and keep the land. They have adopted a similar principle of increasing the stumpage rates every two or three years in proportion to the increase in the average price of lumber.

Mr. CHARLTON.—There is one matter I would like to ask you about. I have seen a great deal of this western timber—in fact last summer I was through a very large tract on Vancouver island, and in my report I stated that the western hemlock is nothing at all like the eastern hemlock. It has been suggested, in fact, that it should be called Alaska pine. It is a beautiful lumber and in my judgement will be worth more than the Douglas fir. Have you ever had that matter taken up?

The WITNESS.—The western hemlock is really a very superior wood to the eastern hemlock. It is an entirely different kind of wood, does not check and does not warp, and is much more suitable for construction purposes, and can be used to advantage for interior furnishing. At the present time it sells for \$1 a thousand higher on the prairie than does the Douglas fir.

Mr. CHARLTON.—I think it is more like our white pine than any other wood grown in the West.

The WITNESS.—Yes, it is.

Mr. CHARLTON.—Mr. MacMillan touched on one thing quite important, as to whether the land should be entirely cleared by the lumbermen, or a certain number of

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trees left. This question has been discussed all over. They have in the Old Country for a long time practised the policy of preserving the smaller timber and only cutting the large. In eastern Canada we have, however, in a measure adopted the Old Country plan. The experience of many of the men engaged in lumbering in the West agrees with what Mr. MacMillan has said, that the proper thing there is to cut everything down and let it come up afresh. I have very much pleasure in moving a vote of thanks to Mr. MacMillan.

Mr. THOBURN.—I have very much pleasure in seconding this vote of thanks. My reason for asking Mr. MacMillan what they are doing in that country was that I think most of the lumbermen in the Ottawa Valley regret that they have not done something in the way of conserving their forests; for, strange to say, once the pine is cut off there is no second growth of pine. The town that I live in, about thirty-five miles from here, was in a pinery at one time, and now the wood that is growing where the pine grew is poplar. A great part of the country where there never was such a thing as poplar known to be grown, when the land is cleared off a good crop of poplar comes up. That is the reason why I was surprised when Mr. MacMillan told us that there was a second growth of Douglas fir. Of course, the situation there may be different than in Ontario, but I have every reason to believe that the lumbermen of the Ottawa Valley especially regret that they did not conserve the smaller trees on their limits.

Motion agreed to.

Committee adjourned.

4 GEORGE V., A. 1914

Referred to on page—

FOREST BRANCH.

Province of British Columbia.

Department of Lands.

TIMBER SALE CONTRACT.

THIS INDENTURE, made the _____ day of _____
 A.D. 191____, between His Majesty the King (herein represented and acting by _____,
 _____, Minister of Lands for the province of British Colum-
 bia), who, with his heirs and successors, is hereinafter called "the Lessor," of the one
 part, and

who, together with _____ executors, administrators, successors, and assigns, is
 hereafter called "the Lessee," of the other part.

WITNESSETH that, in consideration of the payments and stipulations to be made
 and observed by and on the part of the Lessee and of the Lessee's offer to purchase
 made under the said Act, the Lessor doth hereby grant unto the Lessee, under and sub-
 ject to the provisions of Part III of the "Forest Act," and for the term and subject to
 the reservations and conditions hereinafter provided, a license to cut and remove all the
 merchantable timber upon an area which is agreed to comprise _____
 acres, situated and described as follows, and shown upon the map annexed and thereon
 coloured red:

In consideration whereof the Lessee hereby covenants, promises, and agrees with
 the Lessor that the Lessee shall pay to the said Minister of Lands the several sums at
 the times and in the manner following, namely:—

(1) An annual rental, based on _____ acres, at the rate of _____
 per acre, amounting to \$ _____, the first annual pay-
 ment of which is hereby acknowledged; further payments to be made annually
 in advance on the _____ day of _____ in
 each year hereafter during the continuance of the license hereby granted: Pro-
 vided that such annual rental is to be reduced in each year by the omission from
 its computation of six hundred and forty acres or any multiple thereof when
 said six hundred and forty acres or multiple thereof has been logged in the pre-
 ceding year, as proved to the satisfaction of the said Minister.

(2) All forest production dues as provided in the "Forest Act" and amend-
 ments, payable annually in advance on the _____ day of _____
 in each year during the life of this contract, the first annual payment whereof is
 hereby acknowledged.

(3) Royalties and the cost of scaling, payable as follows:—

(4) The cost of cruising, surveying, and advertising incident to this con-
 tract, being the sum of \$ _____, the receipt of which is hereby
 acknowledged.

(5) A stumpage price as follows.

(6) Payable as follows:

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And the Lessee further covenants, promises, and agrees to cut and remove said timber in strict accordance with the following conditions and with all regulations and provisions governing timber sales in the "Forest Act" and amendments:

(1) No timber will be removed from the sale area until it has been conspicuously marked with the following registered mark issued for this timber sale: " ."

(2) No timber will be manufactured or sold until it has been properly scaled, as provided in the "Forest Act" and amendments, and in accordance with the following special provisions:—

(3) No unnecessary damage will be done to young growth or to trees left standing. So far as practicable, trees will be felled uphill, and no trees will be left lodged in the process of felling. If trees designated to be left standing are badly damaged through carelessness during the process of logging or are cut, they will be paid for at the rate of \$. per M.

(4) The following trees will be cut:—

(5) Stumps will be cut so as to cause the least practicable waste, and will not be cut higher than the diameter of the tree at the point where it is cut, and in no case higher than. inches on the side adjacent to the highest ground, except in unusual cases in the discretion of the officer of the Forest Branch in charge.

(6) All trees will be utilized to as low a diameter in the tops as practicable, so as to cause the least waste, and to the minimum diameter of. inches. . . . when merchantable in the judgment of the officer of the Forest Branch in charge. Log lengths will be varied so as to provide for the complete utilization of merchantable timber.

(7) Brush will be disposed of as follows:—

(8) The license hereby granted is to be renewable yearly upon the payment of the annual rental hereby reserved, at the time and in the manner hereinbefore specified, during the term of. years from the date of this contract next ensuing: Provided that all timber is to be cut and removed before the. day of., 191 ; and, further, that the amount cut in any one year under this contract shall not be less than. except with the written consent and approval of the said Minister.

(9) Merchantable trees designated for cutting which are left uncut, timber wasted in tops and stumps, trees left lodged in the process of felling, and any merchantable timber which is cut and not removed from any portion of the cutting area after logging on that portion of the cutting area is completed shall be scaled, measured, or counted as hereinbefore provided, and paid for as follows:—

(5) Provisions for fire protection:—

The Lessee agrees that the sum of \$., which accompanied. . . tender for the timber covered by this contract, shall be applied hereunder in reduction of the purchase price of said timber:

Provided that the Lessee in accepting this contract does so on the express understanding that no Chinese or Japanese shall be employed in connection therewith;

Provided further that all timber cut under this contract shall be used in this province, or be manufactured in this province into boards, lath, shingles, or other sawn lumber, to such an extent to be of use in the trades without further manufacturing, except in the case of piles, telegraph and telephone poles, ties and crib timber, which may be exported under an Order in Council.

The decision of the Minister of Lands will be final in the interpretation of any of the terms and conditions of this contract.

This agreement will not be assigned in whole or in part except with the consent of the Minister of Lands.

Provided always, and these presents are upon this express condition, that if the said Lessee shall fail to fulfil, keep, and observe all and singular the payments, covenants, and stipulations hereinbefore contained, and on part to be paid, observed, and performed, or any of them, or any part thereof, respectively, it shall be lawful for His Majesty, his heirs, successors, or assigns, by the said Minister of Lands, his agent or servant, upon three calendar months' notice to that effect from the Minister of Lands or under the hand of any person duly authorized by him in that behalf, and delivered at the house or office of the said Lessee, or published in four consecutive numbers of the *British Columbia Gazette*, absolutely to forfeit all the rights and privileges of cutting and removing timber or lumber, or otherwise, hereby conveyed, or so much thereof as shall be specified in that behalf in any such notice; and thereupon these presents and all the rights and privileges therein contained shall, so far as in accordance with such notice, cease, determine, and be of none effect, any rule of law or equity to the contrary notwithstanding, without any actual re-entry on the part of the said Lessor, or inquisition, or office found, or other proceeding whatsoever: Provided further that the interest, rights, and privileges of the Lessee in the said hereditaments, tenements, and premises shall be construed as subject always to all the provisions of the "Land Act" and amendments thereof.

In witness whereof the parties hereto have hereunto set their hands and seals the day and year first above written.

Signed, sealed, and delivered on
behalf of the within-named Lessee
in the presence of—

}

Deputy Minister of Lands.

Signed, sealed, and delivered on
behalf of the within-named Lessor
in the presence of—

}

(Lessee or Purchaser.)























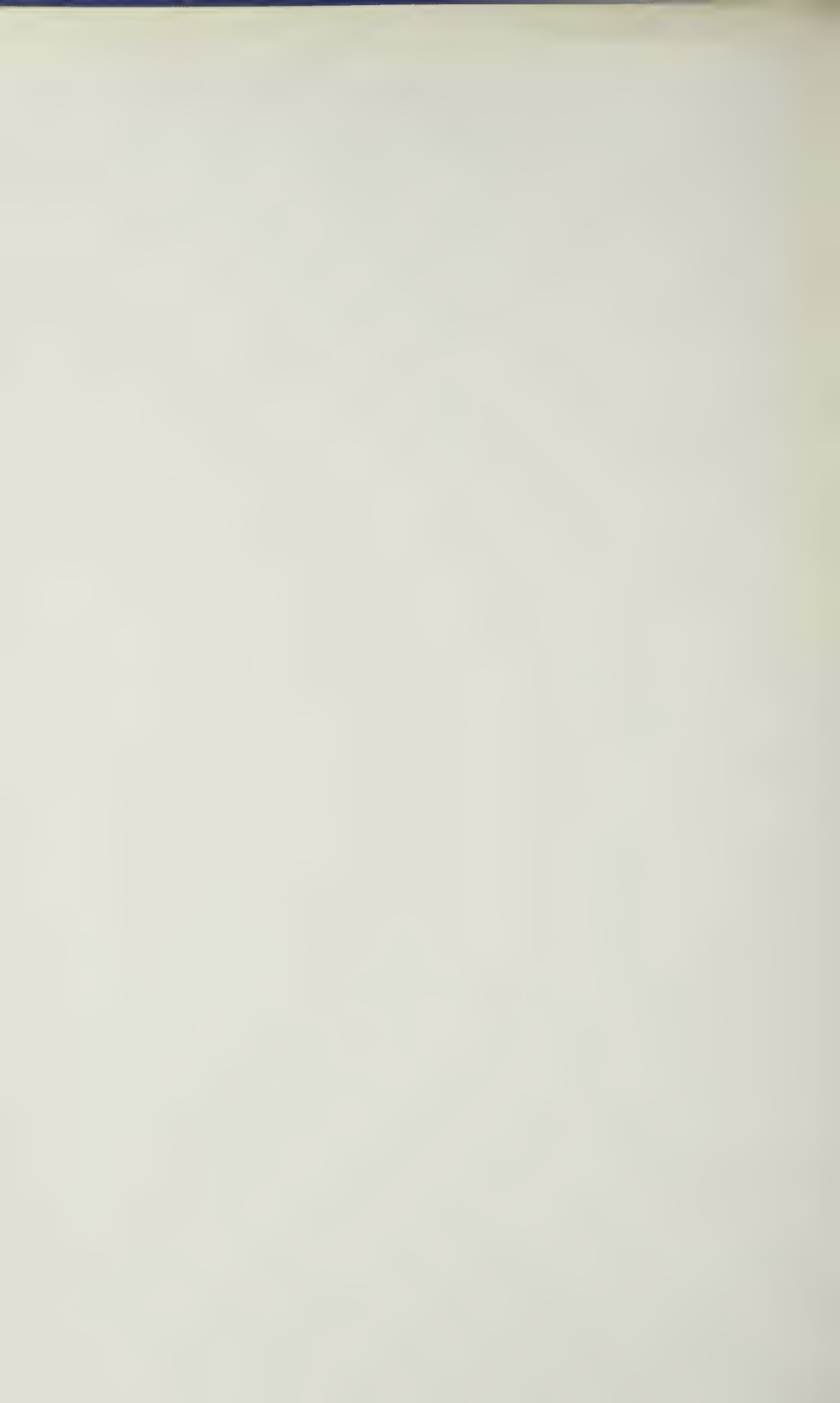




































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